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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,896	09/29/2006	Tadahiro Ohmi	039262-0164	8303
23428 7590 12/02/2010 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
WON, BUMSUK				
ART UNIT		PAPER NUMBER		
2889				
MAIL DATE		DELIVERY MODE		
12/02/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,896

Applicant(s)

OHMI ET AL.

Examiner

BUMSUK WON

Art Unit

2889

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 11-36 is/are pending in the application.
- 4a) Of the above claim(s) 13-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date 7/28/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/22/2010 has been entered.

Response to Amendment

The amendment filed on 11/22/2010 has been entered.

Response to Arguments

Applicant's arguments filed on 11/22/2010 have been fully considered but they are not persuasive. Regarding amended claim 1, the applicant argues that the rejection under 35 USC 103(a) as being unpatentable over Tamura (US 2005/0093455) is improper because the prior art of Tamura does not disclose "a reduced pressure vessel that is a component of a device selected from the group consisting of: vacuum tube, a fluorescent tube, a cold cathode tube, a deuterium discharge tube, an electron beam tube, and X-ray generating tube, an ultraviolet generator, and a static electricity neutralizer." The examiner respectfully disagrees that the rejection is improper because: (1) the newly added claim limitation of "a reduced pressure vessel ... and a static electricity neutralizer" does not sufficiently modify the claimed structure of the device such that the claimed structure differentiates from the structure of the prior art of Tamura; and (2) the fact that the claimed intended use device has eight alternatives infers that usage of the claimed device in different types of devices is obvious variant. Thus, the examiner maintains the rejection under 35 USC 103(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura (US 2005/0093455).

Regarding claim 1, Tamura discloses a vacuum tube having a reduced-pressure vessel containing at least a discharge gas sealed for electric discharge, wherein the sum total of the number of organic gas molecules, the number of water molecules, and the number of oxygen molecules remaining inside said reduced-pressure vessel is smaller than the number of molecules of said discharge gas.

Tamura does not specifically disclose the number of water molecules absorbed on an inner wall of the reduced pressure vessel is not greater than 1×10^{16} molecules/cm³.

However, it is widely known in the art to reduce water molecules absorbed on an inner wall because higher water molecules would deteriorate layers such as phosphor layers which would reduce the reliability of the lamp.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the number of water molecules absorbed on an inner wall of the reduced pressure vessel is not greater than 1×10^{16} molecules/cm³.

Also, one of ordinary skill in the art would have been led to the recited ranges through routine experimentation and optimization. Applicant has not disclosed that the ranges are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that

the process would possess utility using another ranges. Indeed, it has been held that mere ranges limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical.

Regarding the claim limitation of "a reduced pressure vessel that is a component of a device selected from the group consisting of: vacuum tube, a fluorescent tube, a cold cathode tube, a deuterium discharge tube, an electron beam tube, and X-ray generating tube, an ultraviolet generator, and a static electricity neutralizer," the examiner notes that such claim limitation recites intended use of the structure disclosed by Tamura; thus, the claim limitation does not sufficiently modify the claimed structure of the device such that the claimed structure differentiates from the structure of the prior art of Tamura.

Also, the examiner notes Tamura discloses the device generates ultraviolet light (paragraph 99).

Regarding claim 2, Tamura discloses a ratio of said number of molecules of said discharge gas to the sum total of said number of organic gas molecules and said number of water molecules is not smaller than ten times (paragraph 61, not higher than 100 ppm is less than 10,000 times).

Regarding claim 11, Tamura discloses a gas selected from Ar, Kr, or Xe (paragraph 29).

Regarding claim 12, Tamura discloses the vessel is made of silicon oxide as a main component (paragraph 29, "quartz glass").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BUMSUK WON whose telephone number is (571)272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh Toan Ton can be reached on 571-272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bumsuk Won/
Primary Examiner, Art Unit 2889